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 OIPE

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RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/705,686

DATE: 11/22/2000  
 TIME: 13:06:52

**ENTERED**

Input Set : A:\P0709P1D3.txt  
 Output Set: N:\CRF3\11222000\I705686.raw

## SEQUENCE LISTING

## W--&gt; 3 SEQUENCE LISTING

## 5 (1) GENERAL INFORMATION:

7 (i) APPLICANT: Carter, Paul J.  
 8 Presta, Leonard G.  
 10 (ii) TITLE OF INVENTION: Method for Making Humanized Antibodies  
 12 (iii) NUMBER OF SEQUENCES: 26  
 14 (iv) CORRESPONDENCE ADDRESS:  
 15 (A) ADDRESSEE: Genentech, Inc.  
 16 (B) STREET: 1 DNA Way  
 17 (C) CITY: South San Francisco  
 18 (D) STATE: California  
 19 (E) COUNTRY: USA  
 20 (F) ZIP: 94080

## 22 (v) COMPUTER READABLE FORM:

23 (A) MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk  
 24 (B) COMPUTER: IBM PC compatible  
 25 (C) OPERATING SYSTEM: PC-DOS/MS-DOS  
 26 (D) SOFTWARE: WinPatIn (Genentech)

## 28 (vi) CURRENT APPLICATION DATA:

C--> 29 (A) APPLICATION NUMBER: US/09/705,686  
 C--> 30 (B) FILING DATE: 02-Nov-2000  
 31 (C) CLASSIFICATION:

## 37 (vii) PRIOR APPLICATION DATA:

34 (A) APPLICATION NUMBER: 08/146206  
 35 (B) FILING DATE: 17-NOV-1993  
 38 (A) APPLICATION NUMBER: 07/715272  
 39 (B) FILING DATE: 14-JUN-1991

## 41 (viii) ATTORNEY/AGENT INFORMATION:

42 (A) NAME: Lee, Wendy M.  
 43 (B) REGISTRATION NUMBER: 40,378  
 44 (C) REFERENCE/DOCKET NUMBER: P0709P1D3

## 46 (ix) TELECOMMUNICATION INFORMATION:

47 (A) TELEPHONE: 650/225-1994  
 48 (B) TELEFAX: 650/952-9881

## 49 (2) INFORMATION FOR SEQ ID NO: 1:

## 51 (i) SEQUENCE CHARACTERISTICS:

52 (A) LENGTH: 109 amino acids  
 53 (B) TYPE: Amino Acid  
 54 (D) TOPOLOGY: Linear

## 56 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

58 Asp Ile Gln Met Thr Gln Ser Ser Leu Ser Ala Ser Val  
 59 1 5 10 15  
 61 Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Val Asn  
 62 20 25 30  
 64 Thr Ala Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys  
 65 35 40 45

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3 1/2

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```

67  Leu Leu Ile Tyr Ser Ala Ser Phe Leu Glu Ser Gly Val Pro Ser
68                      50                      55                      60
70  Arg Phe Ser Gly Ser Arg Ser Gly Thr Asp Phe Thr Leu Thr Ile
71                      55                      70                      75
73  Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
74                      80                      85                      90
76  His Tyr Thr Thr Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu
77                      95                      100                      105
79  Ile Lys Arg Thr
82 (2) INFORMATION FOR SEQ ID NO: 2:
84     (i) SEQUENCE CHARACTERISTICS:
85         (A) LENGTH: 120 amino acids
86         (B) TYPE: Amino Acid
87         (D) TOPOLOGY: Linear
89     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
91  Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
92    1                      5                      10                      15
94  Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Lys
95                      20                      25                      30
97  Asp Thr Tyr Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
98                      35                      40                      45
100 Glu Trp Val Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr
101                      50                      55                      60
103 Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Ala Asp Thr Ser
104                      65                      70                      75
106 Lys Asn Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
107                      80                      85                      90
109 Thr Ala Val Tyr Tyr Cys Ser Arg Trp Gly Gly Asp Gly Phe Tyr
110                      95                      100                      105
112 Ala Met Asp Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
113                      110                      115                      120
115 (2) INFORMATION FOR SEQ ID NO: 3:
117     (i) SEQUENCE CHARACTERISTICS:
118         (A) LENGTH: 109 amino acids
119         (B) TYPE: Amino Acid
120         (D) TOPOLOGY: Linear
122     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
124  Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
125    1                      5                      10                      15
127 Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Val Ser
128                      20                      25                      30
130 Ser Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
131                      35                      40                      45
133 Leu Leu Ile Tyr Ala Ala Ser Ser Leu Glu Ser Gly Val Pro Ser
134                      50                      55                      60
136 Arg Phe Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
137                      65                      70                      75
139 Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
140                      80                      85                      90

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142 Tyr Asn Ser Leu Pro Tyr Thr Phe Gly Glu Gly Thr Lys Val Glu
143           95                      100                      105
145 Ile Lys Arg Thr
148 (2) INFORMATION FOR SEQ ID NO: 4:
150 (i) SEQUENCE CHARACTERISTICS:
151 (A) LENGTH: 120 amino acids
152 (B) TYPE: Amino Acid
153 (D) TOPOLOGY: Linear
155 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
157 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
158 1           5                      10                      15
160 Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser
161           20                      25                      30
163 Asp Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
164           35                      40                      45
166 Glu Trp Val Ala Val Ile Ser Glu Asn Gly Ser Asp Thr Tyr Tyr
167           50                      55                      60
169 Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser
170           65                      70                      75
172 Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
173           80                      85                      90
175 Thr Ala Val Tyr Tyr Cys Ala Arg Asp Arg Gly Gly Ala Val Ser
176           95                      100                     105
178 Tyr Phe Asp Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
179           110                     115                     120
181 (2) INFORMATION FOR SEQ ID NO: 5:
183 (i) SEQUENCE CHARACTERISTICS:
184 (A) LENGTH: 109 amino acids
185 (B) TYPE: Amino Acid
186 (D) TOPOLOGY: Linear
188 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
190 Asp Ile Val Met Thr Gln Ser His Lys Phe Met Ser Thr Ser Val
191 1           5                      10                      15
193 Gly Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp Val Asn
194           20                      25                      30
196 Thr Ala Val Ala Trp Tyr Gln Gln Lys Pro Gly His Ser Pro Lys
197           35                      40                      45
199 Leu Leu Ile Tyr Ser Ala Ser Phe Arg Tyr Thr Gly Val Pro Asp
200           50                      55                      60
202 Arg Phe Thr Gly Asn Arg Ser Gly Thr Asp Phe Thr Phe Thr Ile
203           65                      70                      75
205 Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln
206           80                      85                      90
208 His Tyr Thr Thr Pro Pro Thr Phe Gly Gly Gly Thr Lys Leu Glu
209           95                      100                     105
211 Ile Lys Arg Ala
214 (2) INFORMATION FOR SEQ ID NO: 6:
216 (i) SEQUENCE CHARACTERISTICS:
217 (A) LENGTH: 120 amino acids

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218      (B) TYPE: Amino Acid
219      (D) TOPOLOGY: Linear
221      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
223  Glu Val Gln Leu Gln Ser Gly Pro Glu Leu Val Lys Pro Gly
224      1          5          10          15
226  Ala Ser Leu Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys
227      20          25          30
229  Asp Thr Tyr Ile His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu
230      35          40          45
232  Glu Trp Ile Gly Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr
233      50          55          60
235  Asp Pro Lys Phe Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser
236      65          70          75
238  Ser Asn Thr Ala Tyr Leu Gln Val Ser Arg Leu Thr Ser Glu Asp
239      80          85          90
241  Thr Ala Val Tyr Tyr Cys Ser Arg Trp Gly Gly Asp Gly Phe Tyr
242      95          100         105
244  Ala Met Asp Tyr Trp Gly Gln Gly Ala Ser Val Thr Val Ser Ser
245      110         115         120
247 (2) INFORMATION FOR SEQ ID NO: 7:
249      (i) SEQUENCE CHARACTERISTICS:
250          (A) LENGTH: 27 base pairs
251          (B) TYPE: Nucleic Acid
252          (C) STRANDEDNESS: Single
253          (D) TOPOLOGY: Linear
255      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
258  TCCGATAICC AGCTGACCCA GTCTCCA 27
260 (2) INFORMATION FOR SEQ ID NO: 8:
262      (i) SEQUENCE CHARACTERISTICS:
263          (A) LENGTH: 31 base pairs
264          (B) TYPE: Nucleic Acid
265          (C) STRANDEDNESS: Single
266          (D) TOPOLOGY: Linear
268      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
271  GTTTGATCTC CAGCTTGGTA CCHSCDCCGA A 31
273 (2) INFORMATION FOR SEQ ID NO: 9:
275      (i) SEQUENCE CHARACTERISTICS:
276          (A) LENGTH: 22 base pairs
277          (B) TYPE: Nucleic Acid
278          (C) STRANDEDNESS: Single
279          (D) TOPOLOGY: Linear
281      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
284  AGGTSMARCT GCAGSAGTCW GG 22
286 (2) INFORMATION FOR SEQ ID NO: 10:
288      (i) SEQUENCE CHARACTERISTICS:
289          (A) LENGTH: 34 base pairs
290          (B) TYPE: Nucleic Acid
291          (C) STRANDEDNESS: Single
292          (D) TOPOLOGY: Linear

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Input Set : A:\P0709PID3.txt  
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294      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
297      TGAGGAGACG GTGACCGTGG TCCCTTGGCC CCAG 34
299 (2) INFORMATION FOR SEQ ID NO: 11:
301      (i) SEQUENCE CHARACTERISTICS:
302          (A) LENGTH: 36 base pairs
303          (B) TYPE: Nucleic Acid
304          (C) STRANDEDNESS: Single
305          (D) TOPOLOGY: Linear
307      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
310      GTAGATAAAT CCTCTAACAC AGCCTATCIG CAAATG 36
312 (2) INFORMATION FOR SEQ ID NO: 12:
314      (i) SEQUENCE CHARACTERISTICS:
315          (A) LENGTH: 36 base pairs
316          (B) TYPE: Nucleic Acid
317          (C) STRANDEDNESS: Single
318          (D) TOPOLOGY: Linear
320      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
323      GTAGATAAAT CCAAATCTAC AGCCTATCTG CAAATG 36
325 (2) INFORMATION FOR SEQ ID NO: 13:
327      (i) SEQUENCE CHARACTERISTICS:
328          (A) LENGTH: 36 base pairs
329          (B) TYPE: Nucleic Acid
330          (C) STRANDEDNESS: Single
331          (D) TOPOLOGY: Linear
333      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
336      GTAGATAAAT CCTCTCTAC AGCCTATCIG CAAATG 36
338 (2) INFORMATION FOR SEQ ID NO: 14:
340      (i) SEQUENCE CHARACTERISTICS:
341          (A) LENGTH: 68 base pairs
342          (B) TYPE: Nucleic Acid
343          (C) STRANDEDNESS: Single
344          (D) TOPOLOGY: Linear
346      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
349      CTTATAAAGG TGTTCACAC TATAACCAGA AATCAAGGA TCGTTTCAGG 50
351      ATATCCGTAG ATAAATCC 68
353 (2) INFORMATION FOR SEQ ID NO: 15:
355      (i) SEQUENCE CHARACTERISTICS:
356          (A) LENGTH: 30 base pairs
357          (B) TYPE: Nucleic Acid
358          (C) STRANDEDNESS: Single
359          (D) TOPOLOGY: Linear
361      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
364      CTATACCTCC CGTCTGCATT CTGGAGTCCC 30
366 (2) INFORMATION FOR SEQ ID NO: 16:
368      (i) SEQUENCE CHARACTERISTICS:
369          (A) LENGTH: 107 amino acids
370          (B) TYPE: Amino Acid
371          (D) TOPOLOGY: Linear
373      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

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VERIFICATION SUMMARY      DATE: 11/22/2000  
PATENT APPLICATION: US/09/705,686      TIME: 13:06:53

Input Set : A:\P0709P1D3.txt  
Output Set: N:\CRF3\11222000\I705686.raw

L:3 M:244 W: Invalid beginning of sequence listing, Data={SEQUENCE LISTING}, Duplicate Sequence Listing Title:  
L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]  
L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]